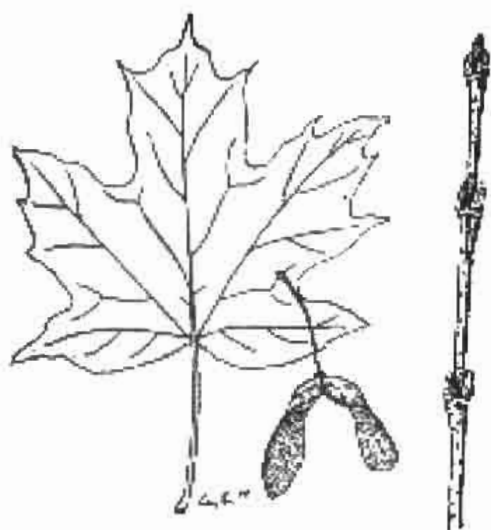


# How to Make Maple Syrup



Department of Natural Resources  
Management & Engineering



University of Connecticut

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*College of Agriculture & Natural Resources*

**Trees:** The most common tree that is utilized in the maple syrup industry is the Sugar Maple (*Acer saccharum*). The sugar maple has the highest sugar content in its sap reaching above 3 percent. In addition, other maple species like red maple, silver maple, and Norway maple can be tapped and used to make maple syrup. However, their sugar content is not as high.

**Tapping:** It all begins when the temperature rises above freezing during the day and falls below freezing during the night. These conditions trigger the sap to begin to flow up the tree. This usually occurs in early to mid-February through the entire month of March in Connecticut. In order to acquire the sap, you must tap into the tree. This is done by drilling into the sapwood of the tree with a 5/16" drill between 1" and 1 1/2" deep. The drill should be angled slightly upward so that the sap will drain downward into the spout. Spouts, also called "taps" can be purchased at some hardware stores or maple syrup equipment dealers. The spout is placed in the hole and tapped in gently with a small hammer until snug into the hole. Sap flows through the spout directly into a bucket. Large operations generally have a network of plastic tubing all leading to a collection tank. Trees have to be 10 inches or more in diameter to tap and spouts can be placed at any height that is easily accessible. A healthy tree can produce a gallon of sap a

above the boiling point, which is 219 degrees Fahrenheit. However in Connecticut, the boiling point of syrup actually varies above and below 219 depending on atmospheric pressure that day. The best way to determine if the syrup is ready is to use a hydrometer. A hydrometer measures the specific gravity of syrup and is very easy to use and accurate.

A rule of thumb is, the quicker you boil the sap, the lighter the finished product will be. If you hold sap too long before boiling, the syrup will be darker. This is due to bacteria in the sap that eats away at sugar in the sap, thus degrading the finished syrup.

**Bottling:** Syrup must be filtered first when it is hot. Felt filters are the best to use. They filter out foreign materials and niter. Niter is a concentration of natural salts and minerals that precipitate out of solution during boiling. Niter is not harmful to eat but it can cause your syrup to be cloudy. The goal is to get clear syrup. Syrup must also be bottled above 180 degrees Fahrenheit to be sterile/hot packed. After bottling, turn the bottle upside down for a few seconds so that a sterile seal forms around the lid.

If mold forms on the top of your syrup, you can scrape it off and re-heat the syrup to 180 degrees to sterilize it.

day on a good day. It takes 40 gallons of sap on average to make 1 gallon of syrup.

Guideline for number of taps per tree

Diameter (inches)	Number of Taps
10 -17	1
18 +	2

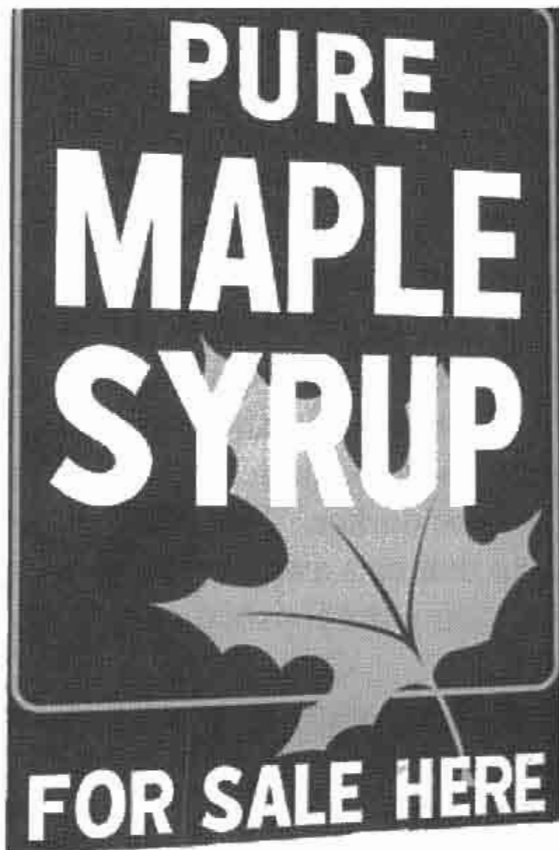


Spout

**Collecting:** Buckets are emptied into a collecting tank usually on a truck or tractor. Then the collecting tank is brought to a central holding tank at the sugarhouse.



**Boiling:** Sap is transferred into the evaporator. The evaporator is basically a large pot on a woodstove. It has a large surface area so that the sap is in contact with more of the heat, thus the sap boils faster. As the sap is boiling in the evaporator, the water evaporates away concentrating the syrup. Syrup is ready to bottle at 7 degrees



Maple Syrup is sold at many sugarhouses

Further information about making maple syrup can be found at this website:

[www.ctmaple.org](http://www.ctmaple.org)



Updated January 2007

This brochure was prepared by Geoff Picard, an undergraduate student in the College of Agriculture and Natural Resources, NRME.

Special thanks to Dr. David Schroeder and Stephen Broderick for their help.